

L 15222-66 ENT(d)/EMP(1) LIP(a) REV/LL

ACC NO: AP6000040

SOURCE CODE: UR/0315/65/000/007/0031/0033

AUTHOR: Levinakiy, L.S.; Tsukhay, A.N.

ORG: none

TITLE: Methods of designing memories with single-action recording of iterative information

SOURCE: Nauchno-tehnicheskaya Informatsiya, no. 7, 1965, 31-33

TOPIC TAGS: computer memory, computer technology, information storage and retrieval

ABSTRACT: A great deal of attention is currently being paid to the design of memories capable of storing information in the binary-code form and producing the sought word not by means of an address, but by the content of the sought word, i.e., "associative memory." This article examines memories in which the convenience of handling variable length information series and the elimination of the excess of the stored information is provided by the use of special recording and reading programs. A variation of an associative memory is described in which the storing device (designed in the form of a pyramid binary coder) automatically provides single-action recording of iterative information. Orig. art. has: 5 figures.

SUB CODE: 09/ SUBM DATE: 13Mar65 / ORIG REF: 001 / OTH REF: 003

TS  
Cord 1/1

UDC: 681.142.07



30486  
S/194/61/000/008/011/092  
D201/D304

9,7140

AUTHORS:

Gryaznov, N.I., Levinskiy, L.S. and Taibrov, A.A.

TITLE:

An operational magnetic memory apparatus with magnetic control

PERIODICAL:

Referativnyy zhurnal. Avtomatika i radioelektronika, no. 8, 1961, 15, abstract 8 B138 (V sb. 100 let so dnya rozhd. A.S. Popova, M., AN SSSR, 1960, 271-278)

TEXT:

It is pointed out that the main source of unreliability of modern operational magnetic memories is the great number of valves or transistors in the address storage, shifting and read-out circuits. The fundamental results are given of work carried out at the Electrical Analogue Laboratory of VINITI of the AS USSR. The MO3Y-1000 (MOZU-1000) designed at this laboratory has 1024 48-digit numbers. The period time 40  $\mu$ sec, the read-out and regeneration time 6  $\mu$ sec. The control circuits have only 47 vacuum valves (originally about 700). The principle of magnetic control is explained, ✓

Card 1/2

ACCESSION NR: AT4026357

S/0000/62/000/000/0215/0221

AUTHOR: Briling, K. K.; Krivorutskiy, Yu. Kh.; Levinskiy, L. S.

TITLE: Construction of a large-capacity magnetic operating memory (MOZU)

SOURCE: Konferentsiya po obrabotke informatsii, mashinnomu perevodu i avtomaticheskomu chteniyu teksta. Moscow, 1961. Vyshisletil'naya i informatsionnaya tekhnika (Information processing and computer technology); sbornik materialov konferentsii. Moscow, 1962, 215-221

TOPIC TAGS: memory, addressing, circuit design, magnetic memory, switch, commutator

ABSTRACT: The article describes the construction of an address-selection system for a magnetic operational memory device of large capacity and medium speed, built on the "Z" system. The various ways in which this problem might be solved are discussed. The authors indicate as the preferred technique the switching of the currents from a single source over selected branches through the use of current commutation devices (switches). The work begun in 1957 at the Laboratoriya elektromodelirovaniya (Electro-simulation Laboratory) on the design of an operating magnetic memory with magnetic control led, in 1959, to the creation of the MOZU-1000. The experience acquired in this

Card 1/3

ACCESSION NR: AT4026357

work demonstrated the operability and reliability of magnetic control systems; in this connection, the decision was made to continue this work in the development of a large-capacity magnetic operating memory. In the matter of selecting the control system, the authors compare two versions of address commutators: 1) a commutator using magneto-diode keys; 2) a commutator using boundary transformers. Both versions are discussed and analyzed in the article. With regard to the magneto-diode key type switch it is shown that the power of this device is basically determined by the switching of unselected cores by switching and zero channels and depends on the cross section of these channels; in turn, the section is determined by the number of output windings. After reaching a certain optimum value, the section begins to increase as the number of output turns increases. The second version (using boundary transformers) is also shown to suffer from a substantial defect - high rate of power consumption - because of the presence of a large number of passive elements. As a result, it was decided to use a third version of the address commutator, with a semiconductor triode operating under saturation as the switching element. This technique is described in some detail and it is shown that the channel current source can be very substantially simplified - one GU-50 tube instead of the 10-12 needed in the other versions, with the feed voltage capable of being lowered to 300 v, instead of 700-900 v. Orig. art. has: 0 figures and 24 formulas.

ASSOCIATION: None

2/3

Card

BRILING, K.K., IPVINSKIY, L.S.

Magnetic memory storage in an informational and logical machine.  
NTI no.1:32-37 145. (MIRA 18:6)

LEVINSKIY, M.I.; FILIMONOVA, M.M.; GUDZENKO, Zh.D.

Polarographic determination of chloroform and methylene chloride  
present simultaneously in hydrochloric acid. Zav.lab. 27 no.5:546-  
548 '61. (MIRA 14:5)

(Chloroform)  
(Methane)

FILIMONOVA, M.M.; LEVINSKIY, M.I.; GUDZENKO, Zh.D.

Polarographic determination of carbon tetrachloride, chloroform,  
and methylene chloride in hydrochloric acid. Zav.lab. 28  
no.4:424-426 '62. (MIRA 15:5)

(Chloroform)  
(Methane)

(Carbon tetrachloride)  
(Polarography)



S/032/62/028/012/020/023  
B104/B186

AUTHORS: Shatalov, B. I., and Levinskiy, M. I.

TITLE: A small centrifugal pump for aggressive media

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 12, 1962, 1525

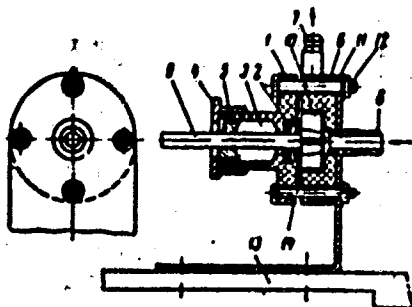
TEXT: A centrifugal pump (Fig. 1) was designed consisting of a plexiglass body (1), a ball bearing (2), a stuffing box (3), a sealing device (4), (5), a cover (6) with the mouthpieces (7), (8). The centrifugal wheel is a four-vaned blade wheel with a textolite shaft (9). The pump is designed for operation by an M-2 (MSh-2) or DM-2 (DShS-2) motor (220 v, 0.5 a, 40 w, 5000 rpm) of the type normally employed to drive sewing machines. The pump has a delivery of 200-250 liters per hour. It has been in use for some time to fill containers and dosing devices with hydrochloric acid and alkali. [Abstracter's note: Complete translation.] There is 1 figure.

Fig. Centrifugal pump for aggressive media. Legend: (10) blade wheel, (11) fastening plate, (12) pin, (13) support, (14) gasket.

Card 1/2

A small centrifugal pump for...

S/032/62/028/012/020/023  
B104/B186



Card 2/2

LEVINSKIY, M.I.; MUKHIN, I.V.; SEREDA, I.P.

Colorimetric method of determining free chlorine in hydrochloric  
acid. Ukr.khim.zhur. 29 no.1:100-101 '63. (MIRA 16:5)  
(Chlorine--Analysis) (Hydrochloric acid)

LEVINSKIY, M. S.

✓ Toxicity of benzene hexachloride in anti tick treatment of cattle. M. S. Levinskiy (Agr. Inst., Stavropol' Veterinariya 33, No. 1, 72-5 (1965)).—Repeated dipping of cattle in 0.25-0.4% emulsions of benzene hexachloride did not cause a development of toxic symptoms in the animals and no deposition in the fatty tissues was observed. Contamination with milk, if any, was below a biological level. (1)

LEVINSKIY, M. S., Cand Vet Sci -- (diss) "<sup>On</sup>~~Concerning~~ the effect  
of hexachloran-creolin emulsion <sup>upon</sup> ~~on~~ the organism of cattle and  
sheep." Stavropol', 1957. 16 pp. (Stavropol' Agr Inst of Min  
Agr USSR), 130 copies. (KL, 9-58, 121)

- 119 -

LEVINSKIY, O. [Levins'kiy, O.]

Let's visit construction workers. Znan. ta pratsia no.10:2  
O '59. (MIRA 13:2)

1. Ekskursovod pavil'onu "Budivnitstvo," Vistavka peredovogo  
dosvidu v narodnomu gospodarstvi URSS.  
(Building--Exhibitions)

BEZAK, R.A.; LEVINSKIY, O.B.

Determination of coal hardness in the Angren deposit.

Trudy Sred.-Az.politekh.inst. no.12:274-277 '61.

(MIRA 18:12)

POPOV, F.S., inzh.; BURKATSKIY, A.P., tekhnik; LEVINSKIY, O.I., inzh.;  
VERB, A.N., inzh.

Concerning T.P. Musatov's article "Hand hoists." Energetik  
10 no.9:29-32 S '62. (MIRA 17:1)



[illegible]

"Ice Dyeing of Wool." Thesis for degree of Cand. Technical Sci. Sub 29 Jun 50.  
Moscow Textile Inst

Summary 71, 4 Sep 52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1950. From Vechernyaya Moskva, Jan-Dec 1950.

1. BOYKOLOVSKIY, B. M.; KAZAKOVA, L. S.; LEVINSKIY, P. G.
2. USSR (600)
4. Dyes and Dyeing - Wool
7. Synthesis and investigation of compounds for dyeing wool according to the ice type.  
Zhur. prikl. khim. 25, no. 11, 1952.
9. Monthly List of Russian Accessions, Library of Congress, ~~February~~ 1953, Uncl.

LEVINSKIY, S.N.

Improving the quality of leather fleshing knives. Kosh.-obuv.prom.  
3 no.2:22-24 F '61. (MIRA 14:4)  
(Leather industry--Equipment and supplies)

AUTHOR: NEKRASOVA, G.A., LEVINSKIY, S.V., ORLOV, O.Ya., 80-8-15/26  
KONSTANTINOV, M.M.  
TITLE: The Application of Radioactive Isotopes in the Agriculture and  
Science of the U.S.S.R. (Primeneniye radioaktivnykh i stabilnykh  
izotopov i isluheniy v narodnom khozyaystve i nauke v S.S.S.R.,  
Russian)  
PERIODICAL: Atomnaya Energiya, 1957, Vol 3, Nr 8, pp 162-166 (U.S.S.R.)  
ABSTRACT: In April 1957 an isotope Conference took place in Moscow which was  
attended by more than 3000 delegates of 1016 different firms and in-  
stitutes. Altogether, 444 papers were read which were distributed  
over 4 departments: 1.) The technical and industrial use of iso-  
topes, 2.) Chemistry, 3.) Biology, medicine, agriculture, 4.) The  
production of isotopes and  $\gamma$ -guns.  
ASSOCIATION: Not given  
PRESENTED BY:  
SUBMITTED:  
AVAILABLE: Library of Congress  
Card 1/1

KURDYUMOV, G.V., akademik, obshchiy red.; NOVIKOV, I.I., obshchiy red.;  
~~LEVINSKIY, S.V.~~, kand.med.nauk, red.; PRUSAKOV, V.N., kand.khim.  
nauk, red.; SKDOV, V.V., kand.med.nauk, red.; ANDREYENKO, Z.D.,  
red.; MAZEL', Ye.I., tekhn.red.

[Proceedings of the Second International Conference on the Peace-  
ful Uses of Atomic Energy, Geneva, 1958] Trudy Vtoroi mezhdu-  
narodnoy konferentsii po mirnomu ispol'zovaniyu atomnoy energii,  
Zheneva, 1958. (Doklady sovetskikh uchenykh) Moskva, Izd-vo  
Glav.uprav. po ispol'zovaniyu atomnoy energii pri Sovete Ministrov  
SSSR. Vol.6. [Production and application of isotopes] Poluchenie  
i primeneniye izotopov. 1959. 388 p. (MIRA 12:11)

1. International Conference on the Peaceful Uses of Atomic Energy,  
2d, Geneva, 1958. 2. Chlen-korrespondent AN SSSR (for Novikov).  
(Isotopes)

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929610020-2

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929610020-2"

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929610020-2

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929610020-2



LEBEDINSKIY, A.V., obshchiy red.; LEVINSKIY, S.V., kand.med.nauk, red.;  
SEDOV, V.V., kand.med.nauk, red.; SHIROKOVA, Z.S., red.; MAZEL',  
Ye.I., tekhn.red.

[Proceedings of the Second International Conference on the  
Peaceful Uses of Atomic Energy, Geneva, 1958] Trudy Vtoroi  
meshdunarodnoy konferentsii po mirnomu ispol'sovaniyu atomnoy  
energii, Zheneva, 1958. (Doklady sovetakikh uchenykh) Moskva,  
Izd-vo Glav.uprav.po ispol'sovaniyu atomnoy energii pri Sovets  
Ministroy SSSR. Vol.5. [Radiobiology and radiation medicine]  
Radiobiologiya i radiatsionnaya meditsina. 1959. 429 p.

(MIRA 12:11)

1. International Conference on the Peaceful Uses of Atomic Energy,  
2d, Geneva, 1958. 2. Chlen-korrespondent AMN SSSR (for Lebe-  
dinskiy).

(RADIOBIOLOGY)

LEBEDINSKIY, A. V.; LEVINSKIY, S. Y.; NEFEDOV, Yu. G.

"The general principles in reaction of the organism on the complex environmental factors acting in the cabins of cosmic vehicles.

report submitted for 15th Intl Astronautical Cong, Warsaw, 7-12 Sep 64.

LEBEDINSKIY, A.V.; LEVINSKIY, S.V.; NEFEDOV, Yu.G.

Unique experiment of Soviet scientists. Av. i kosm. 47 no.11:  
24-31 N '64. (MIRA 17:11)

YEGOROV, I.A.; KRUCHININ, V.I., redaktor; LEVINSKIY, V.B., redaktor;  
SHPAK, Ye.G., tekhnicheskiiy redaktor

[Faolite and its use in the chemical industry] Faolit i ego primeneniye v khimicheskoi promyshlennosti. Pod red. V.I.Kruchinina.  
Moskva, Gos. nauchno-tekhn. izd-vo khim. lit-ry, 1956. 74 p.  
(Korroziya v khimicheskikh proizvodstvakh i sposoby zashchity, no.6)  
(Plastics) (MIRA 9:7)

FOTINICH, Ivan Dmitriyevich; LEVINSKIY, V.B., redaktor; SHEPAK, Ye.G.,  
tekhnicheskii redaktor

[Production of nitrogen fertiliser] Proizvodstvo azotnykh udobrenii.  
Moskva, Gos. nauchno-tekhn. izd-vo khim. lit-ry, 1956. 247 p.  
(Nitrogen industries) (MLRA 10:1)  
(Fertilizers and manures)

IVANOVA, Ye.P., starshiy nauchnyy sotr.; ZERNOV, Ye.V., prepodavatel';  
KIRSANOVA, G.A., nauchnyy sotr.; NOVIKOVA, N.D., nauchnyy sotr.;  
TARASOVA, H.D.; RISHINA, R.G., starshiy inzh.; LEVINSKIY, V.B.,  
red.; SHPAK, Ye.G., tekhn. red.

[Work organization and establishing technical standards in  
enterprises manufacturing synthetic fibers] Organizatsiya truda  
i tekhnicheskoe normirovanie na predpriyatiyakh khimicheskikh  
volokon. By E.P.Ivanova i dr. Moskva, Gos. nauchno-tekhn.izd-vo  
khim. lit-ry, 1961. 175 p. (MIRA 15:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo  
volokna (for Ivanova, Kirsanova, Novikova). 2. Moskovskiy tek-  
stil'nyy institut (for Zernov). 3. Nachal'nik normativno-  
issledovatel'skoy laboratorii po trudu Kalininskogo kombinata  
(for Tarasova). 4. Gosudarstvennyy komitet po khimii pri Sovete  
Ministrov SSSR (for Rishina).

(Textile fibers, Synthetic—Production standards)

SEVOST'YANOV, Aleksey Grigor'yevich; GINZBURG, L.N., retsenzents;  
LEVINSKIY, V.P., retsenzents; AKSENOVA, I.I., red.; KNAKNIN,  
M.T., tekhn. red.

[Methods for analyzing the irregularities of spinning products;  
characteristics of random functions and their application] Me-  
tody issledovaniia nerovnoty produktov priadeniia; kharakte-  
ristiki sluchainykh funktsii i ikh primeneniie. Moskva, Rostekh-  
izdat, 1962. 385 p. (MIRA 15:7)

(Spinning)

20271

15-2220

1808, 1273, 1142

S/180/61/000/002/011/012  
E073/E535

**AUTHORS:** Portnoy, K. I., Levinskiy, Yu.V. and Fadeyeva, V.I.  
(Moscow)

**TITLE:** On the Nature of Interaction of Some High Melting  
Point Carbides and their Solid Solutions with Carbon

**PERIODICAL:** Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh  
nauk, Metallurgiya i toplivo, 1961, No.2, pp.147-149

**TEXT:** The diagrams of state of metal-carbon systems (the  
metal being Ti, Zr, Nb, Ta, Hf) have been studied in considerable  
detail. However, no data are available in literature on the  
interaction in the pseudo-binary systems TiC-C and NbC-C and as  
regards ZrC-C, TaC-C and HfC-C it is only mentioned that their  
diagrams are of a eutectic character. The aim of the work described  
was to determine the nature of the interaction of such carbides and  
their solid solutions with carbon. Particular attention was paid to  
investigating the temperature of appearance of the liquid phase in  
such systems. The equipment consisted of heating apparatus of  
25 kW, the heating being carried out by direct passage of current  
through a graphite cartridge, inside which the investigated carbide  
Card 1/6



20271

On the Nature of Interaction ...

S/180/61/000/002/011/012  
E073/E535

was placed on a graphite base. The experiments were carried out in an argon atmosphere with a pressure of 5 to 10 mm Hg in excess of the atmospheric pressure. The temperature of appearance of the liquid phase was determined as the minimum temperature at which a thin layer of the carbide powder fused with particles of 10 to 10  $\mu$  on the graphite base. The fusion was observed visually after cooling the specimens. The temperature was measured by an optical pyrometer. Near the liquid phase temperature the measurements were made at steps of 20 to 30°C, the average accuracy of measuring the temperature being  $\pm 50^\circ\text{C}$ . Metallographic analysis has shown that the pseudo-binary systems TiC-C, ZrC-C, NbC-C, TaC-C, HfC-C and the pseudo-ternary systems TiC-ZrC-C, NbC-ZrC-C, NbC-TiC-C, TaC-NbC-C, TaC-TiC-C, TaC-ZrC-C, TiC-HfC-C and ZrC-HfC-C are eutectic in nature. Microphotographs of the eutectic structures of the first five systems are reproduced in Fig.1. X-ray analysis of solidifying drops of the eutectic showed that two phases were present in the specimens, namely, graphite and the appropriate carbide. This confirmed the suitability of the selected method of investigations. Fig.2 shows the hypothetical diagrams of state of

Card 2/6

20271

On the Nature of Interaction ...

S/180/61/000/002/011/012  
E073/E535

the pseudo-binary systems TiC-C, ZrC-C, NbC-C, TaC-C and HfC-C. The composition of the eutectic is determined by a method described by Saltykov in his book "Stereometric metallography" published in 1958. In investigating pseudo-ternary systems, MeC-Me'C-C, mixtures of the powders of the individual carbides or mixtures of powders of the appropriate metals were taken as the starting material, whereby the quantities were chosen so as to obtain a solid solution of carbides of the required composition. X-ray analysis of specimens held for durations of 10 sec to 3 min at 2200-3200°C has shown that for all the investigated compositions and all the holding times only one homogeneous phase was present, which indicates a very high speed of carbidization of the metal powders and of their homogenization at these temperatures. Fig.3 shows the dependence of the lattice period  $a$ , kX of homogeneous solid solutions of carbides on their composition, mol.%. These relations are in good agreement with data published by C. Agte et al. (Ref.6), A. Ye. Koval'skiy and Ya. S. Umanskiy (Ref.7) and J. Norton (Ref.8). In the investigated pseudo-ternary systems, the eutectics consist of graphite and a carbide phase of variable composition. It was established that the temperature of formation Card 3/6

20271

On the Nature of Interaction ...

S/180/61/000/002/011/012  
E073/E535

of binary eutectics in these pseudo-ternary systems depends to a considerable extent on the composition of the solid solution of the carbides. These dependences are plotted in Fig.4 (t, °C vs. wt.%). Data were obtained on the fusion temperature and the composition of the eutectics in the systems TiC-C and NbC-C. The fusion temperatures of the eutectics of the ZrC-C and TaC-C systems are in good agreement with the data given in the literature (Refs.2-3). However, the fusion temperature of the eutectic of the system HfC-C was 450°C higher than the value given by P. Cotler and I. J. Kohn (Ref.4). It was established that the diagrams of state of the pseudo-ternary systems TiC-ZrC-C, NbC-ZrC-C, NbC-TiC-C, TaC-NbC-C, TaC-TiC-C, TaC-ZrC-C have a eutectic nature. Furthermore, the dependence was determined of the temperatures of formation of binary eutectics in these systems as a function of the composition of the carbide phase. There are 4 figures and 8 references: 3 Soviet and 5 non-Soviet.

[Abstractor's Note: This is a slightly condensed translation.]

SUBMITTED: September 12, 1960

Card 4/6

28157

S/122/61/000/003/011/013  
D241/D305

I.IIIO

2808, 2208

**AUTHORS:**

Mukaseyev, A.A., Engineer, Rakovskiy, V.S., Candidate of Technical Sciences, Babich, B.N., and Leviniskiy, Yu. V., Engineers

**TITLE:**

Some problems of ultrasonic machining hard-melting ceramic materials

**PERIODICAL:** Vestnik mashinostroyeniya, no. 3, 1961, 63-66

**TEXT:** Cast heat resisting alloys as well as alloys based on carbides and bonded with nickel or chrome work in temperatures up to 10000. The alloys based on carbides, nitrides, borons and silicides of rare metals are considered as the most promising by K.I. Portnoy and G.V. Samsonov (Ref. 2: Boronnye splavy, VINITI, 1960). They possess high creep resistance and hardness as well as thermal stability, but it is impossible to machine them by usual methods. Their grinding has a low efficiency, whereas anode machining produces cracks. Ultrasonic machining is, therefore, the most suitable. The main criteria of the former method are the

Card 1/4

28157

S/122/61/000/003/011/013  
D241/D305

Some problems of ultrasonic ...

wear of the tool and material. The accuracy of the machined profile is reduced when the wear of tool is significant. The authors determined experimentally the coefficient K which is the ratio of wear of material to that of the tool. Specimens were prepared from powders of hard melting alloys of sufficient purity and homogeneity. Specimens were obtained by hot pressing in a laboratory lever press, and their porosity varied between 0 to 25% in order to study the effect of porosity on ultrasonic machining. After shot blasting, specimens were weighed to determine their density. The ultrasonic machining was carried out on a cast iron disc and using boron carbide suspension in kerosene. To assess the wear of tool and the value of coefficient K, the concentrator was made according to the exponential law of reduction. Balls from bearings were used as a tool, and their wear proved to be minimum compared to other materials. The spherical form of the ball allowed most accurate data to be obtained. The machined blind holes were measured with a dial indicator. The amplitude of swing of the tool vibrations was 0.10-0.11 mm, and the frequency was

Card 2/4

28157

S/122/61/000/003/011/013  
D241/D305

Some problems of ultrasonic ...

18 - 20 Kc. The concentration of abrasive was 40-60%, which is the optimum, and its grain size - no. 150. The static load on the tool reached 400 g. The hardness of the material as well as its brittleness characterize its ability to plastic deformation. It is possible to assume that less ultrasonic energy is required for plastic deformation of harder materials and, therefore, a greater part of the power will be directed to breaking (cutting). Higher porosity of ceramics reduces the cross section of contacts between the particles, which affects the machinability. Comparison of data does not permit a relationship to be established between K and the microhardness of the material. It was noticed that specimens of the same material, but of different density possess unequal coefficients K. Alloys of  $W_2B$ ,  $MoSi_2$ ,  $ZrC$  as well as the heat resisting alloy BS-1 with a relative density from 70 to 100% were investigated. The data obtained show that higher porosity improves the ultrasonic machinability. It should be noted that the machinability of ceramics is 5-10 times greater than that of carbides. There are 1 figure, 4 tables and 6 references: 5 Soviet-

Card 3/4

Some problems of ultrasonic ...

28157  
S/122/61/000/003/011/013  
D241/D305

bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: F.W. Glaser and W. Iwanick, Sintered titanium carbide, "Journal of Metals, vol. 4, no. 4, 1952. X

Card 4/4

1 224  
21.2100

24427  
S/080/61/034/007/001/016  
D223/D305

AUTHORS: Portnoy, K.I., and Levinskiy, Yu.V.

TITLE: Production of technical zirconium nitride

PERIODICAL: Zhurnal prikladnoy khimii, v. 34, no. 7, 1961,  
1413 - 1418

TEXT: The present works deal with possibility of direct nitro-  
genation of zirconium powder by utilizing the heat of formation of  
zirconium oxide and nitride to heat the metallic powder to the  
temperature required for active nitrogenation. Usually in direct  
nitrogenation the zirconium powder is placed in a quartz tube,  
heated to the required temperature at a low rate of nitrogen flow.  
In the present work such a scheme for producing zirconium nitride  
is given with special emphasis on the quantity of the oxidizing  
agent ( $H_2O$ ). The water is chosen as a source of oxygen since it  
gives a lower heat effect when compared to oxygen or air. Initially,  
the zirconium was in a damp state (80-90 %, moisture) hence,

Card 1/7

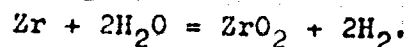


2h:27

S/080/61/034/007/001/016  
D223/D305

Production of technical ...

before charging the furnace, it required prolonged drying in vacuum at 10-15°C, for 2-3 hours. Since nitrogen was dried, the change in the tube content of the zirconium powder regulated the quantity of oxygen in the reaction zone. The volume of the quartz tube used was 5 l and since both inlet and outlet temperature of the gas was kept at 300°C, the maximum partial steam pressure was determined, ignoring the hot zone condition, and found to be 31 mm. of s.t. mercury pressure. The excess water was frozen out. The result of calculated quantities of water required for maximum pressure of saturated steam at 300°, is given in tabulated form. The calculated values of saturated steam pressure are plotted by the authors against the quantities of water required to heat the powders to 400 and 800°C, and the calculated values of ZrO<sub>2</sub> and O<sub>2</sub> in the final product are plotted against the additions of different quantities of water assuming that the whole of the water reacted with zirconium to form ZrO<sub>2</sub>, i.e.

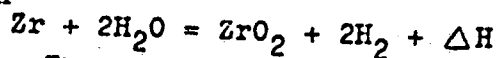


Card 2/7

Production of technical ...

24427  
S/080/61/034/007/001/016  
D223/D305

It was suggested that the whole exothermal heat due to the oxygenation and nitrogenation is used up in warming the powder, i.e. there is no heat loss at all, and the maximum rise in temperature for various quantities of oxygenation can be calculated and equated to the heat obtained from the oxygenation and nitrogenation process. The standard enthalpies of water and  $ZrO_2$  are 57.8 and 258.5 kcal/mole respectively (Ref. 3: O. Kubashevskiy and E. Evans, *Termo-khimiya v metallurgii*, Il. 1954) hence, the standard enthalpy for following reaction



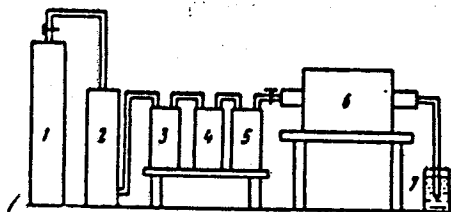
is 142.9 kcal/mole. The calculation taking  $C_p = f(T)$  for temperature of 1200°C gives the heat effect of 133.6 kcal/mole. To carry out the experimental trials the set-up given in Fig. 4 was used. The nitrogen from cylinder (1) was dried by passing through tower (2) filled with silica-gel and then through towers (3), (4) and (5) filled with calcium chloride and then passed through the quartz tube in the silica furnace (6). The powder was kept in a molybdenum

Card 3/7

Production of technical ...

24427  
S/080/61/034/007/001/016  
D223/D305

Fig. 4.



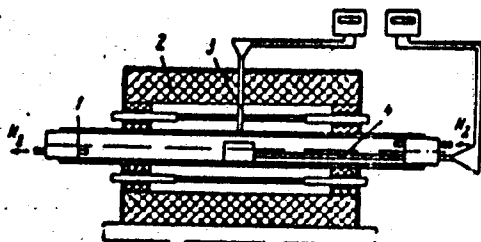
or porcelain boat. The system ended with the water seal (7) which acted as a pressure regulator for nitrogen. To study the rise in powder temperature the set-up, shown in Fig. 5 was used. Through quartz pipe (1) containing damp Zr powder and placed inside silica furnace (2), nitrogen was passed and a small rise in temperature noted. The thermocouple (3) controlled the temperature of the tube and temperature of the powder itself by a Pt/Pt-Ro thermocouple in a ceramic cover (4). Since the mass of powder was small (30 g), the

Card 4/7

Production of technical ...

24427  
S/080/61/034/007/001/016  
D223/D305

Fig. 5.



heat used to raise the temperature of the ceramic resulted in a low temperature recorded by the thermocouple. The results are given in Fig. 6. The effect of the quantity of water, heating temperature and particle size of the powder on achieving the critical oxidation rates was studied and the results are given in graphic and tabulated form. The conclusion drawn is that heating damp Zr powder at 450-600°C in the nitrogen current for 15 mins. would

Card 5/7

Production of technical ...

24427  
S/080/61/034/007/001/016  
D223/D305

Fig. 6. Change in temperature of the charge (1) and working space (2) with the time.

Legend: A = temperature °C; B = time, min.

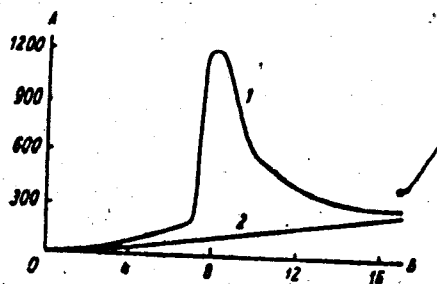


Рис. 6. Изменение температуры шихты (1) и рабочего пространства (2) во времени.

A — температура (°C), B — время (мин.).

Card 6/7

24427

Production of technical ...

S/080/61/034/007/001/016  
D223/D305

give a product containing 9.5 - 10.2 wt. % of nitrogen, i.e. an oxynitride of zirconium which can be used instead of pure zirconium nitride. The authors note that zirconium nitride has a large homogeneous region ( $\text{ZrN}_{0.56} - \text{ZrN}_{1.00}$ ) and stable lattice period ( $a = 4.57 - 4.58 \text{ k kh}$ ). Hence the product obtained has a varying nitrogen composition and small quantities of dissolved oxygen. The authors thank G.V. Samsonov for his suggestions. There are 7 figures, 3 tables, and 4 Soviet-bloc references.

SUBMITTED: October 14, 1960

X

Card 7/7

1

MUKASEYEV, A.A., inzh.; RAKOVSKIY, V.S., kand. tekhn.nauk; BABICH, B.N., inzh.;  
LEVINSKIY, Yu.V., inzh.

Machinability of refractory powder-metal materials with ultrasonic  
waves. Vest.mash. 41 no.3:63-66 Mr '61. (MIRA 14:3)  
(Ultrasonic waves—Industrial applications)  
(Powder metal processes)

KRESTAN, M.M.; CHAMOV, F.I.; SHCHETININ, V.N.; LEVINSKIY, Yu.V., red.;  
ZAZUL'SKAYA, V.F., tekhn. red.

[Album of apparatus and equipment for industrial painting shops]  
Al'bum oborudovaniia i apparatury okrasochnykh tsekhov. Moskva,  
Goskhimisdats, 1962. 323 p. (MIRA 16:3)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po khimii.  
(Painting, Industrial—Equipment and supplies)



PORTNOY, K.I.; LEVINSKIY, Yu.V.

Interaction in systems high-melting metals - carbon - nitrogen.  
Issl. splav. tsvet. met. no.4;279-285 '63. (MIRA 16:8)

(Ceramic metals--Thermodynamic properties)

FORTNOV, K.I.; LEVINSKIY, Yu.V. (Moscow)

High temperature equilibrium of the reaction  $\text{HfN} + \text{C} \rightleftharpoons \text{HfC}$   
+  $1/2 \text{N}_2$ . Zhur. fiz. khim. 37 no.11:2467-2473 N'63.  
(MIRA 17:2)

ACCESSION NR: AP4005444

8/0076/63/037/012/2627/2634

AUTHOR: Portnoy, K. I. (Moscow); Levinskiy, Yu. V. (Moscow)

TITLE: Study of the high-temperature equilibrium of the reversible reaction between  $\text{TiN} + \text{C}$  and  $\text{TiC} + 1/2\text{N}_2$

SOURCE: Zhurnal fizicheskoy khimii, v. 37, no. 12, 1963, 2627-2634

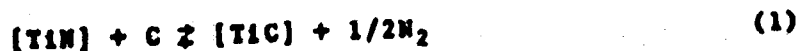
TOPIC TAGS: high temperature refractory, refractory material, refractory carbide, refractory nitride, titanium carbide, titanium nitride, high temperature equilibrium, titanium carbonitride formation, activation energy, equilibrium constant, solid phase diffusion

ABSTRACT: The equilibrium compositions and lattice parameters of the  $\text{TiC-TiN}$  solid solutions have been determined in the 1480—2480C range at a nearly atmospheric nitrogen pressure. A series of powdered samples of 1) titanium carbide, 2) titanium nitride and carbon black in a 2:1 ratio, and 3) titanium and carbon black in a 2:1 ratio were heated simultaneously in a stream of nitrogen for 15 min to 32 hr at the desired temperature and then cooled rapidly. The reaction products were analyzed chemically and by x-ray. The x-ray powder patterns

Cord 1/72

ACCESSION NR: AP4005444

were obtained with URS-70 and URS-50I equipment; the lattice parameters were measured in a KROS-1 chamber. The x-ray composition data are shown to be more accurate than the chemical data. The good agreement of the lattice-parameter data obtained with different starting materials indicated that a state of equilibrium had been reached within the 1700—2480C range. X-ray data revealed that intragranular diffusion is the limiting factor in the equilibration process in either direction. Nearly pure TiN was obtained in the reaction of titanium with nitrogen and carbon after 4 hr at 1480C. Thermodynamic calculations show 1) that the investigated reaction can be described by the equation:



and 2) that the calculated equilibrium constant ( $K_p$ ) is in satisfactory agreement with the experimentally determined  $K_p$  for reaction (1). The empirical temperature dependence of  $K_p$  ( $\log K_p = -(5600/T) + 2.78$ ) has thus been verified. The activation energy of carbonitride formation from TiC and nitrogen was calculated from the experimental straight-line plot of  $\ln(1/\tau) = f(1/T)$ , where  $\tau$  is the time necessary to reach equilibrium. Orig. art. has: 2 tables and 6 figures.

Cord 2/82

SHATENSHTEYN, A.I., prof.; VYRSKIY, Yu.P., kand. khim. nauk;  
PRAVIKOVA, N.A., kand. tekhn. nauk; ALIKHANOV, P.P.,  
kand. khim. nauk; ZHDANOVA, K.I., kand. khim. nauk;  
IZYUMNIKOV, A.L., mlad. nauchn. sotr.; LEVINSKIY, Yu.V.,  
red.

[Practical laboratory manual on the determination of the  
molecular weights and molecular weight distribution of  
polymers] Prakticheskoe rukovodstvo po opredeleniiu mo-  
lekuliarnykh vesov i molekuliarno-vesovogo raspredeleniia  
polimerov. [By] A.I. Shatenshtein i dr. Moskva,  
Khimiia, 1964. 188 p. (MIRA 18:2)

VOROB'YEV, Nikolay Konstantinovich; GOL'TSSHMIDT, Vladimir  
Avgustovich [deceased]; KARAPET'YANTS, Mikhail  
Khristoforovich; KISELEVA, Vera Leonidovna; KRASNOV,  
Konstantin Solomonovich; LEVINSKIY, Yu.V., red.

[Laboratory work in physical chemistry] Praktikum po  
fizicheskoi khimii. Izd.3., perer. i dop. Moskva, Khim-  
mizdat, 1964. 383 p. (MIRA 18:4)

ACCESSION NR: AP4040474

S/0226/64/000/003/0109/0113

AUTHOR: Arabey, B. G. (Moscow); Salibekov, S. Ya. (Moscow);  
Levinskiy, Yu. V. (Moscow)

TITLE: Ignitability of certain powder materials

SOURCE: Poroshkovaya metallurgiya, no. 3 (21), 1964, 109-113

TOPIC TAGS: metal powder, metal powder ignition, metal powder combustion, refractory compound ignition, zirconium ignition, niobium ignition, tantalum ignition, molybdenum ignition, tungsten ignition, titanium ignition, iron ignition, boron ignition, boride ignition, carbide ignition

ABSTRACT: Ignition temperature and the nature of combustion of some refractory metal, carbide, and boride powders have been determined in an effort to establish safe handling procedures for these materials. Tested powders had a grain size of 3—10  $\mu$ , the one most frequently used in powder metallurgy. Heating was done either in a furnace in an air atmosphere or by a point source (a nichrome spiral) brought into

Cord 1/2

ACCESSION NR: AP4040474

contact with powder. It was found that the smaller the powder grain size, the more pyrophoric the powder. In the furnace, at grain sizes tested, powders of zirconium ignited at 270C, niobium at 290C, tantalum at 290C, molybdenum at 310C, tungsten at 410C, titanium at 520C (with a flash), nickel at 470C, iron at 470C (flash at 630C), and boron at 570C (with a flash). With a point heat source the ignition temperatures were generally higher than those obtained with the furnace, the difference varying from 10C for boron to 220C for molybdenum. Only iron ignited at 350C. Chromium and nickel remained intact at point source temperatures up to 1000C. Borides ( $TiB_2$ ,  $ZrB_2$ ,  $CrB_2$ ,  $HfB_2$ ,  $SiB_6$ ,  $B_4C$ ) do not ignite under 1100C; zirconium, hafnium, niobium, and tungsten carbides have an ignition point ranging from 760 to 1000C. Orig. art. has: 2 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 21Feb63

DATE ACQ: 06Jul64

ENCL: 00

SUB CODE: MM :1A

NO REF SOV: 005

OTHER: 003

Card 2/2



"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929610020-2

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929610020-2"

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929610020-2

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929610020-2"

ARABEY, B.G. (Moskva); LEVINSKIY, Yu.V. (Moskva); SALIBEKOV, S.Ye. (Moskva)

Spontaneous combustion and pyrophoric properties of certain  
powder materials. Porosh. met. 4 no.6:110-113 N-D '64.  
(MIRA 18:3)

EXPERIMENT

A solution of metal ion in water

was prepared by dissolving

specimens of zirconium metal in concentrated nitric acid for 24 hours.

APPROVED FOR RELEASE: 07/12/2001

DECLASSIFICATION CODE

21 APR 86

1986

1986

1986

1986

1986

1986

1986

ACCESSION NR: AP4039254

8/0032/64/030/006/0725/0726

AUTHOR: Levinskii, Yu. V.

TITLE: Quantitative x-ray analysis of titanium, zirconium, and hafnium carbonitrides

SOURCE: Zavodskaya laboratoriya, v. 30, no. 6, 1964, 725-726

TOPIC TAGS: titanium carbonitride, zirconium carbonitride, hafnium carbonitride, crystalline lattice parameter, aluminum, silicon, calcium, magnesium, iron, photocamera KROS 1, Tamman furnace

ABSTRACT: Crystalline lattice parameters of zirconium, titanium, and hafnium carbonitrides were measured with the help of a specially developed x-ray procedure to ascertain if the variation of these parameters of solid MeN-MeC solutions follows the linear law. Powdered materials were combined with various amounts of aluminum, silicon, calcium, magnesium, and iron. The samples were nitrogenized in a Tamman furnace at 1700-2300C until a complete homogenization was obtained. Lattice parameters were measured in Cu K $\alpha$  - radiation with a KROS-1 camera to an accuracy  $\pm 0.0005$  kX. The accuracy of nitrogen and carbon determination was  $\pm 0.2\%$  (by weight) for titanium and  $\pm 0.05\%$  for zirconium and hafnium carbonitrides. High-

Card 1/3

ACCESSION NR: AP4039254

temperature treatment and the use of high purity nitrogen minimized oxygen content in the samples. This was important for an accurate determination of the sample composition because oxygen forms solid solutions  $Ti(N,C,O)$ ;  $Zr(N,C,O)$  and  $Hf(N,C,O)$ . Solid solutions of carbides and nitrides of hard-to-fuse metals often deviate from the Vegard law, but those of titanium, zirconium, and hafnium were similar in their physical and chemical properties and showed only a small deviation. The results of these experiments were found to agree closely with those of chemical analyses. They sustained entirely the initial linear law postulate, as can be seen in Fig. 1 of the Enclosure. The author believes that a similar quantitative x-ray analysis is applicable to other solid solutions of the isomorphic difficultly fusible carbides and nitrides. Orig. art. has: 1 table and 1 figure.

ASSOCIATION: none.

SUBMITTED: 00

DATE ACQ: 18Jun64

ENCL: 01

SUB CODE: MM,SS

NO REF SOV: 002

OTHER: 003

Card 2/3

ACCESSION NR: AP4039254

ENCLOSURE: 01

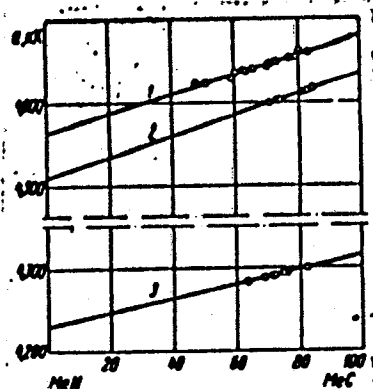


Fig. 1. Parameter variation of a solid solution MeN-MeC: 1. ZrN-ZrC; 2. HfN-HfC; 3. TiN-TiC.

Card 3/3



**"APPROVED FOR RELEASE: 07/12/2001**

**CIA-RDP86-00513R000929610020-2**

**APPROVED FOR RELEASE: 07/12/2001**

**CIA-RDP86-00513R000929610020-2"**

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929610020-2

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929610020-2"

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929610020-2

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929610020-2"

LEVINSKIY, Yu.V. (Moskva); SALIBEKOV, S.Ye. (Moskva); LEVINSKAYA, M.Kh.  
(Moskva)

Interaction between vanadium, niobium and tantalum diborides  
with carbon. Poroch.met. 5 no.11:66-69 N '65. (MIRA 18:12)

1. Submitted January 4, 1965.

L 21205-66 EWT(m)/ETC(f)/EPF(n)-2/ENG(m)/T/EWP(t) IJP(c) JD/WW/JG

ACC NO AP6001471

(N) SOURCE CODE: UR/0226/65/000/012/0036/0038

AUTHOR: Portnoy, K. I.; Levinskiy, Yu. V.; Salibekov, S. Ye.

72  
B

ORG: none

TITLE: Isothermal saturation of refractory metals with nitrogen and step nitriding

SOURCE: Poroshkovaya metallurgiya, no. 12, 1965, 36-38

TOPIC TAGS: metal, refractory metal, annealing, nitrogen, periodic system, annealing, titanium, zirconium, niobium, tantalum, nitriding

ABSTRACT: The article deals with studies of optimal conditions for nitriding of compact samples of group IV and V metals of D. I. Mendeleev's periodic system. The effect of the rate of temperature rise during isothermal annealing of samples in a nitrogen medium on the nitriding process was investigated. Optimal rates of temperature rise for nitriding of 1-mm thick samples of titanium, zirconium, niobium and tantalum are established, and it is shown that isothermal saturation of group IV and V metals with nitrogen is best carried out in stages. [Based on author's abstract] [AM]

SUB CODE: 11/ SUBM DATE: 11Jun65/ ORIG REF: 001/ OTH REF: 005

Card 1/1

L 20666-66 EWP(a)/EWT(m)/ETC(c)/EAI(m)/T/EWP(t) IJP(a) JD/WM/JG/AT/WH  
ACC NR: AP6001475 (N) SOURCE CODE: UR/0226/65/000/012/0056/0062

AUTHOR: Levinskiy, Yu. V. (Moscow); Salibekov, S. Ya. (Moscow); 80  
Levinskaya, M. Kh. (Moscow) B

ORG: none

TITLE: Interaction of chromium, molybdenum, and tungsten borides with carbon

SOURCE: Poroshkovaya metallurgiya, no. 12, 1965, 56-62

TOPIC TAGS: chromium alloy, molybdenum alloy, tungsten base alloy, melting point, high temperature effect, lattice parameter, particle interaction, graphite

ABSTRACT: The interaction of chromium, molybdenum, and tungsten borides with carbon was investigated. It was found that the systems  $\text{CrB}_2\text{-C}$ ,  $\text{MoB-C}$ ,  $\text{MoB}_2\text{-C}$ ,  $\text{WB-C}$ , and  $\text{W}_2\text{B}_5\text{-C}$  are eutectic. The eutectic melting points are: 2150, 2370, 2450, 2540, and 2460K, respectively. The existence of the compound  $\text{Mo}_2\text{BC}$  is confirmed. The compound is stable with respect to carbon up to 2100K, at which temperature the liquid phase is formed. The parameters of the lattices of  $\text{CrB}_2$ ,  $\alpha\text{-WB}$ , and  $\text{W}_2\text{B}_5$  do not change on heating when in contact with graphite. Orig. art. has: 4 figures and 3 tables. [Based on author's abstract] [NT]  
SUB CODE: 11, 20/ SUBM DATE: 06Feb65/ ORIG REF: 001/ OTH REF: 001  
Card 1/1 OK

7  
lithium diboride, aluminum diboride, hafnium diboride, carbon.

**"APPROVED FOR RELEASE: 07/12/2001**

**CIA-RDP86-00513R000929610020-2**

**APPROVED FOR RELEASE: 07/12/2001**

**CIA-RDP86-00513R000929610020-2"**



L 8075-66 EWT(m)/EPT(c)/LIT(n)/-77/201(1)/-101(1)  
ACC NR: AP5027135 SOURCE CODE: UR/0126/65/020/004/0519/0523

AUTHOR: Levinakiy, Yu. V.; Salibekov, S. Ye.; Leninskaya, M. Kh.;  
Strogonov, Yu. D. 38

ORG: None 36

TITLE: Carbiding of titanium and zirconium nitrides 6

SOURCE: Fizika metallov i metallovedeniye, v. 20, no. 4, 1965, 519-523 27

TOPIC TAGS: carbide, nitride, titanium containing compound, zirconium containing compound, metal diffusion 6

ABSTRACT: The article gives the results of an investigation of diffusion of carbon into titanium and zirconium nitrides at temperatures of 1900-2480°C. The nitrogen content in the samples of titanium nitride was 19.6 wt%, and in the zirconium nitride -- 11.8 wt%. The samples were nonporous and homogeneous; the microhardness did not vary over the cross section and was approximately 1800 kg/mm<sup>2</sup> for titanium nitride and 1700 kg/mm<sup>2</sup> for zirconium nitride. The grain size was 0.5 to 1.0 mm. The nitride plates in the charge of calcined lamp black were placed in a graphite holder in a graphite tubular furnace through which argon was circulated at a pressure of 3-5 mm Hg. Temperature measure-

Card 1/2

UDC: 539.12.172 2

L 8075-66

ACC NR: AP5027135

2

ments were made by optical pyrometer. The tests on the diffusion of carbon into titanium nitride were made at 1900, 2000, 2100, 2200, and 2300°; those on zirconium nitride at 1930, 2040, 2260, 2370, and 2480°C. Holding time was 15 min. to 6 hours. After cerbidizing, the samples were subjected to metallographic analysis, the microhardness was analyzed, and some samples were subjected to layer-by-layer x-ray analysis. The experimental data indicate that in the diffusion of carbon into titanium and zirconium, layers are formed on the nitrides which are close in their structure to titanium and zirconium carbides. In the transition zone between the forming carbide and the basic nitride layer, the concentrations of carbon and nitrogen change sharply. The rate of growth of the carbide layer, at constant temperature, is of a parabolic nature, and the constants of the parabola depend on the temperature in an exponential manner. Orig. art. has: 3 formulas and 5 figures. 27

SUB CODE: MM/ SUBM DATE: 26Feb65/ ORIG REF: 004/ OTH REF: 000

Card 2/2W

L 46669-66 EWT(d)/EWT(m)/EWP(k)/EWP(h)/T/EWP(a)/EWP(v)/EWP(t)/EWP(l)/ETI  
 ACC NR: AP6009578 (N) SOURCE CODE: UR/0226/65/000/011/0066/0069

IJP(c) AT/WH/WH/JD/JG

AUTHOR: Levinskiy, Yu. V.; Salibekov, S. Ye.; Levinskaya, M. Kh. (Moscow)  
 (Moscow) (Moscow)

ORG: none

TITLE: Diborides of vanadium, niobium and tantalum and their interaction with carbon

SOURCE: Poroshkovaya metallurgiya, no. 11, 1965, 66-69

TOPIC TAGS: boride, vanadium, niobium, tantalum, carbon, metal powder, lattice parameter, powder metal compaction

ABSTRACT: Modern high-temperature engineering often involves contact interaction between transition-metal borides and graphite. This may be exemplified by boride-graphite thermocouples, high temperature furnaces, and the processes of boride production. Hence, the investigation of the interaction between borides (particularly diborides) and graphite is of major practical interest. Accordingly, the authors investigated the interaction between carbon and the diborides of vanadium, niobium and tantalum. The diborides were prepared from powders of the corresponding metals (particle size 5-10  $\mu$ ). Radiographic analysis revealed that only two phases: carbon and the corresponding diboride, exist in the systems VB<sub>2</sub>-C,

Card 1/3

L 46669-66

ACC NR: AP6009578

NbB<sub>2</sub>-C and TaB<sub>2</sub>-C. Hence, all the investigated binary systems are pseudobinary, which is in good agreement with the published literature; they all also are eutectic, as revealed by microstructural examination. The lattice parameter of NbB<sub>2</sub> and TaB<sub>2</sub>, when these are heated in contact with graphite or are present in a melt with carbon, differs somewhat from the lattice parameter of the original diborides. This may be attributed to dissolution of carbon in the borides as well as to the displacement of the boride composition to a region with greater saturation by boron. On the basis of these findings it was possible to plot hypothetical constitution diagrams of the pseudobinary systems VB<sub>2</sub>-C, NbB<sub>2</sub>-C and TaB<sub>2</sub>-C, presented in Fig. 1. It is further established that the pressing of the powders of these

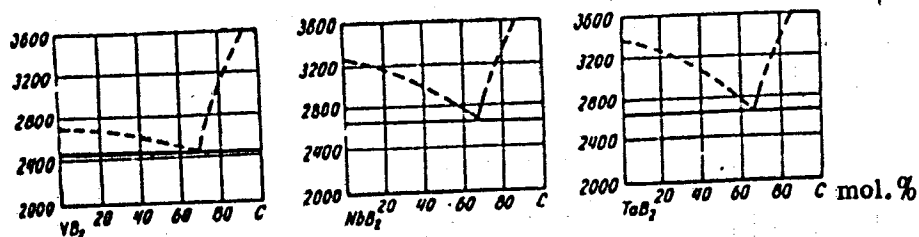


Fig. 1. Hypothetical constitution diagrams of the systems VB<sub>2</sub>-C, NbB<sub>2</sub>-C and TaB<sub>2</sub>-C

Card

2/3

L 46669-66

ACC NR: AP6009578 /

diborides in graphite molds must be carried out at temperatures not exceeding 2500-2600°K.  
Orig. art. has: 2 figures and 1 table.

SUB CODE: 11,20,13/ SUBM DATE: 04Jan65/ ORIG REF: 005/ OTH REF: 002

Card 3/3 hs

LEVINSKY L. Kliniky tuberkulózy v Praze. Bakteriologické nálezy přilebce tuberkulózy streptomycinem, Bacteriological findings in streptomycin-treated cases, Rozhledy v Tuberkulóze, Prague 1949, 9/2-3 (175-182) Graphs 2 Tables 3 Illus. 7

The author reports on the bacteriological examination of sputum for tubercle bacilli in 82 patients with pulmonary tuberculosis and 9 patients with tuberculous meningitis treated with streptomycin. (1) In the serial examination of direct slides from the sputum he observed in 42% of the cases the occurrence of conspicuously similar forms of bacilli. In 2 cases there was a massive occurrence of non-acid-fast tubercle bacilli in the sputum. The occurrence of short rods, an effect of streptomycin observed in vitro, was never recorded. (2) In the serial examination by culture of the sputum there occurred in 10% of the cases in the first days of administration of streptomycin a prolonged growth of colonies to 102 days. (3) In no case did the sputum become permanently negative while the patient was having streptomycin treatment. (4) In the cerebrospinal fluid in patients with tuberculous meningitis the bacilli were found in 5 out of 9 cases.

Kvacek - Prague (XV, 4, 8)

So: Medical Microbiology and Hygiene, Section IV, Vol 3, No 1-6

LEVINSKY, L.

Streptomycin therapy of tuberculosis of the oral cavity.  
Cas. lek. cesk. 90 no.31:961-968 3 Aug 1951. (CML 21:1)

1. Of the Tuberculosis Clinic in Prague (Head -- Prof. J.  
Jedlicka, M.D.).

KRCILEK, Antonin, Dr; SKOP, Vaclav, Dr; LEVINSKY, Ladislav, Doc. Dr;  
KRCILKOVA, Milada, Dr

Congenital abnormalities of the pulmonary veins. Cas. lek. cesk.  
93 no.31-32:864-868 6 Aug 54.

1. IV. interni klinika. Prednosta prof. Dr Bohumil Prusik (for Krcilek,  
Skop) 2. Plicni klinika. Prednosta prof. Dr Jaroslav Jedlicka (for  
Levinsky) 3. IV. detska klinika. Prednosta prof. Dr Fr Blasek  
(for Krcilkova)

(VEINS, PULMONARY, abnormalities)  
(ABNORMALITIES,  
pulm. veins.)



EXCERPTA MEDICA Sec 15 Vol 9/5 Chest Dis. May 56...

1140. LEVINSKY L. Klin. tuberk., Praha. "Zkušenosti s myko - a chemoterapií atypických forem generalisované tuberkulózy. The experience with myco- and chemotherapy of atypical forms of generalized tb ROZIL. TUBERK. 1955, 15/4 (163-167)

Six patients with atypical forms of generalized tb are discussed in detail. In 5 patients tb of the lymphatic system was observed. All patients were treated by

LEVINSKY, L.

POIAK, M.; LEVINSKY, L.; JEDLIČKA, J.; JEDLIČKA, V.; ZAK, F.

Operative closure of congenital esophagobronchial fistula in a woman with congenital pulmonary cysts & multiglandular insufficiency: nanosomia & geroderma produced by anovarianism. Rozhl. chir. 36 no. 7: 454-464 July 57.

1. Chirurgická klinika hygienické fakulty (prof. Dr. Emerich Polak), plicní klinika (prof. Dr. Jaroslav Jedlička), II, patologicko-anatomický ústav (prof. Dr. Václav Jedlička) Karlovy university v Praze.

(ESOPHAGUS, fistula

congen. esophagobronchial fistula with congen. pulm. cysts and nanosomia & geroderma caused by anovarianism, surg. (Cz))

(BRONCHI, fistula

same)

(LUNGS, cysts

congen. with congen. esophagobronchial fistula & nanosomia & geroderma caused by anovarianism, surg. (Cz))

(OVARIES, abnormal

absence, causing nanosomia & geroderma, with congen. esophagobronchial fistula & congen. pulm. cysts surg. (Cz))

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929610020-2

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000929610020-2"

EXCHARTA MEDICA Sec 15 Vol 13/3 Chest Dis. Mar 60

788. PULMONARY MANIFESTATIONS IN DISSEMINATED LUPUS ERYTHEMATOSUS - Plicní manifestace diseminovaného lupus erythematosus - Lovinský L. and Bednář B. Plicní Klin. a Hlavový I. Pat.-Anat. Ústav Univ. Karlovy, Praha - ACTA UNIV. CAROLINAE 1958, 11 (1297-1318) illus. 14

Two clinical cases are presented. The first, treated in hospital for 17 months, died at the age of 33 yr. LE cells were not found. A complex of manifestations: rheumatoid arthritis, recurring erythema, purpura, tenosynovitis, bursitis, recurring pleurisy, and pericarditis, myocarditis, hypoplastic bone marrow, anaemia, leucopenia, renal failure and convulsions were indicative of systemic lupus erythematosus. This diagnosis was only confirmed histologically on post-mortem. On X-ray the lungs showed chronic interstitial pneumonitis of the right

SKOP, V.; PETRIKOVA, J.; LEVINSKY, L.

Contribution to angiographic investigations on anomalies of the  
pulmonary arteries and veins. Cesk. rentg. 13 no.4:213-219 Aug 59

1. IV. interni klinika (prednosta prof. dr. B. Prusik) a plicni  
klinika KU (prednosta prof. dr. J. Jedlicka)  
(PULMONARY ARTERY, abnorm.) (PULMONARY VEINS, abnorm.)  
(ANGIOGRAPHY)

JEDLICKA, Jaroslav; LEVINSKY, Ladislav

Angiogenic murmur caused by the strangulation of the pulmonary artery by a sclerotic form of pulmonary sarcoidosis. Cas.lek.cesk. 98 no.49/50:1560-1564 4 D '59.

1. Klinika pro tuberkulozu University Karlovy v Praze, prednosta prof.dr. J. Jedlicka.

(SARCOIDOSIS compl.)

(LUNG DISEASES compl.)

(PULMONARY ARTERY dis.)

LEVINSKY, L.

Prof. dr. Jaroslav Jedlicka, doctor of medical science, on his 70th birthday. Cas.lek.cesk 100 no.32/33:994-997 18 Ag '61.

(BIOGRAPHIES)

LEVINSKY, L., VOJTISEK, V.; PETRIKOVA, J.; ZAKOVA, N.

Biopsy of the lungs in disseminating pneumopathies. Cas.lek.cesk  
100 no.32/33:1039-1045 18 Ag '61.

1. Klinika tuberkulozy, prednosta prof. dr. J. Jedlicka, chirurgicka  
klinika HLF, prednosta prof. dr. E. Polak, II.patol. anatomicky  
ustav FVL, prednosta prof. dr. V. Jedlicka.

(LUNG DISEASES pathol)



LEVINSKY, K.

1. Medical and Laboratory Investigations. Vol. 1, pp. 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

USSR/Medicine - Tuberculosis  
Medicine - Vaccination

Jan 49

"Antituberculosis Vaccination," A. M. Levinson,  
4 pp

"Pel'daber 1 Abnaber" No 1

BCG is the best antituberculosis vaccine available to date. Stresses value of revaccination with this vaccine. Recommends first series prior to 11 months of age, second series during kindergarten age, third during 8 - 12 year age period, and fourth in adolescence. Last two series are administered on the surface of the skin while first two are administered orally. BCG comes in

57/Agc100

USSR/Medicine - Tuberculosis (Contd)

Jan 49

2-cc ampoules which contain up to 400 million living bacteria. Research is under way to determine methods for storing this vaccine effectively for long periods.

LEVINSON, A. M.

57/Agc100

LEVINSON, A.M. kandidat tekhnicheskikh nauk.

Welded tubular shafts. Dum.prom.31 no.10:22 O '56.

(MIRA 10:1)

1. Nauchno-issledovatel'skiy institut bumash.  
(Papermaking machinery) (Shafts and shafting)

KOZLENKO, Yu.L.; LEVINSON, A.M.; TYMINSKAYA, S.Yu.

Dynamic balancing of papermaking machine parts. Bumagodel.mash.  
no.6:175-186 '58. (MIRA 13:8)

(Papermaking machinery)  
(Balancing of machinery)

LEVINSON, A.M.

Innovations in the manufacturing technology of press rolls. Bama-  
godel.mash. no.6:187-192 '58. (MIRA 13:8)  
(Papermaking machinery)

LEVINSON, A.M., kand. tekhn. nauk

Cooling cylinders with anticorrosive coatings. *Mum. prom.* 34 no.5:  
16-17 My '59. (MIRA 12:6)  
(Papermaking machinery)

LEVINSON, A.M.

Equipment for increasing the precision in the manufacture of  
drying cylinders. Bumagodel.mash. no.7:81-86 '59. (MIRA 13:5)  
(Papermaking machinery)

LEVINSON, A.M.

Manufacture of cooling cylinders with a corrosion-resistant  
coating. *Bunagodel.nash.* no.7:88-96 '59. (MIRA 13:5)  
(Papermaking machinery) (Protective coatings)



LEVINSON, A.M., kand.tekhn.nauk

Plates of knotted screens made of acid-resistant steel. Bum.  
prom. 74 no.10:21-22 O '59. (MIRA 13:2)

1. Nauchno-issledovatel'skiy institut bumagodelatel'nogo  
mashinostroyeniya.

(Paper industry--Equipment and supplies)

LEVINSON, A.M.; SVITNEVA, A.V.

Top press rolls with a quartz and rubber covering. Bum.prom. 34  
no.12:14-16 D '59. (MIRA 13:4)

1. Nauchno-issledovatel'skiy institut po proyektirovaniyu  
bunagodelatel'nykh mashin.  
(Papermaking machinery)

LEVINSON, A.M.; Prinimali uchastiye: REVIS, I.A.; TYMINSKAYA, S.Yu.; ETKIN,  
~~Is.I.~~

Knottter drums made of acid-resistant steel. Bumagodel. mash. no.8:135-139  
'60. (MIRA 14:3)

(Papermaking machinery)

LEVINSON, A.M.; Prinimali uchastiye: ZIGBERMAN, D.I.; TYMINSKAYA, S.Yu.;  
ETKIN, Ye.I.; BARGER, I.B.; SLAVSKIY, G.M.

Dynamic balancing of flexible tubular rolls. Bumagodel. mash.  
no.8:158-163 '60. (MIRA 14:3)

1. Nauchno-issledovatel'skiy institut po proyektirovaniyu buma-  
godelatel'nykh mashin (for Zigberman, Tyminskaya, Etkin). 2. Lenin-  
gradskiy politekhnicheskii institut im. Kalinina (for Barger, Slavskiy).  
(Papermaking machinery) (Balancing of machinery)